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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,038

12/20/2005

Hiroyuki Yoshida

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EXAMINER

PRINCE, FRED G

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,038	Applicant(s) YOSHIDA, HIROYUKI	
	Examiner FRED PRINCE	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1205.0907</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuzawa et al. (JP 2002-066507).

Matsuzawa et al. teach a method for producing methane gas from organic wastes, comprising: treating organic wastes with at least one of supercritical water and sub-critical (paragraph 0012) water to convert the organic wastes into low molecular weight substances (paragraph 0015); and subjecting the low molecular weight substances to methane fermentation (4; paragraph 0015).

3. Claims 1-3, 4-8, 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita et al. (JP 2002-102870).

Yamashita et al. teach a method for producing methane gas from organic wastes, comprising: treating organic wastes with at least one of supercritical water and sub-critical (abstract; col. 4) water to convert the organic wastes into low molecular weight substances (abstract); and subjecting the low molecular weight substances to methane fermentation (abstract).

4. Claims 1-3, 5-8 and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada et al. ("Catalytic Wet Oxidation Process for Wastewater Treatment", from Applicant's IDS filed December 2, 2005).

Harada et al. teach a method for producing methane gas from organic wastes, comprising: treating organic wastes with at least one of supercritical water and sub-critical (page 3) water to convert the organic wastes into low molecular weight substances (page 5); and subjecting the low molecular weight substances to methane fermentation (page 6; Fig. 4).

5. Claims 1-3, 5-8 and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue et al. ("Developing Wastewater Recycling Technologies by Catalytic Wet Oxidation Process", from Applicant's IDS filed December 2, 2005).

Inoue et al. teach a method for producing methane gas from organic wastes, comprising: treating organic wastes with at least one of supercritical water and sub-critical (page 11) water to convert the organic wastes into low molecular weight substances (page 12); and subjecting the low molecular weight substances to methane fermentation (page 12).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1797

7. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of the primary references above.

The primary references are described above. The references do not disclose the methane fermentation being within the recited hours or the carbon digestion efficiency being at the recited range.

It is submitted that it is known in the art to break down complex organics into low-molecular weight compounds prior to a methane fermentation stage in order to increase the efficiency and purity of the methane produced (see, for examples, US Pat No 4,722,741 to Hayes et al. and US Pat No 4,067,801 to Ishida et al.) and it is known in the art that residence time effects the degree of conversion, wherein conversion may be as high as 90% with a residence time of a few hours depending on the carbon load (see, for example, US Pat No 4,609,460 to Vellinga). Accordingly, it is submitted that it is well within the purview of the skilled artisan to utilize the recited residence time and achieve the recited efficiency in order to, for example, degrade a given amount of carbon compounds.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRED PRINCE whose telephone number is (571)272-1165. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fred Prince/
Primary Examiner, Art Unit 1797

fgp
2/12/08